Attachment 2
RESPONSE TO PUBLIC COMMENTS

Introduction

In June 2002, the Natural Resources Board authorized the Department to hold public hearings and solicit public comments on the proposed revisions to Ch. NR 445, "Control of Hazardous Pollutants", and related chapters dealing with the regulation of emissions of hazardous air pollutants.

Five public hearings were held during August 2002. There were a total of 29 people in attendance at the hearings. Twelve registered "as interests may appear", 6 registered in opposition, 2 in support and the remainder submitted blank registration slips. Five people presented oral comments.

Written comments were accepted through September 13, 2002. Thirty-two companies, trade associations, local government units and environmental and civic organizations submitted comments. In addition, over 1000 letters or e-mails were received from citizens in 175 communities in Wisconsin.

Following the public comment period, the Department held several meetings with stakeholders to discuss specific comments. The topics discussed included diesel generators, coal dust, variance procedures for incinerators, regulatory threshold levels (particularly for carcinogenic air contaminants), the relationship between the federal and state air toxics programs, and accidental spills.

This Response to Public Comments is organized in five sections. Section 1 covers comments that address general issues related to regulating hazardous air pollutants. Section 2 covers comments regarding the regulation of diesel generators. Section 3 covers comments regarding the regulation of coal dust emissions. Section 4 addresses comments on specific issues regarding the proposed rule package. And, Section 5 addresses comments received from the Legislative Council Rules Clearinghouse.

Section 1. Comments on General Issues

Most commenters stated that there were elements of the draft rule that they opposed and elements that they supported. Many noted their appreciation of the work of Department staff in developing the rule package, particularly the open and deliberative rulemaking process and the effort of staff to resolve issues. As a result, they supported many of the provisions in the draft rule package, including the establishment of risk-based threshold levels for carcinogenic air contaminants and the overall approach to streamlining the regulatory process. This approach led to measures that reduced administrative work, provided additional flexibility in demonstrating compliance with the regulations, and focused efforts on emissions of greater environmental significance. Measures that were supported include:

- The concept of setting risk-based threshold levels for carcinogens,
- The addition of threshold levels for different stack heights ,
- The definition of due diligence,
- The modeling options for compliance demonstration,
- The streamlined format for the tables and the separate table for pharmaceuticals,
- The inclusion of the process for updating NR 445,
- The ability to certify compliance as an alternative to revising operation permits or obtaining a construction permit

Elements in the draft rule that commenters did not support were, for the most part, ones that had been discussed at considerable length during the rulemaking process. They were controversial then and continued to be controversial. These issues were identified and discussed in the June 3, 2003 Background memo from the former secretary, Darrell Bazzell, to the Natural Resources Board. They are briefly summarized here.

A. The Scope of NR 445

1. Process for Listing Substances in NR 445

Comments: The Department received a number of comments regarding the reliance on third party lists to identify hazardous air pollutants. The commenters said that this results in too many regulated substances without knowing if there is a threat to public health or the environment in Wisconsin. Furthermore, they said, the process for future updates to NR 445 will lead to its continual expansion as more substances are added to these third party lists. (Wisconsin Manufacturers and Commerce (WMC), Wisconsin Paper Council (WPC), Aggregate Producers of Wisconsin, Pechiney Plastic Packaging)

Response*: The fundamental public policy objective of NR 445 is to ensure, to the extent possible, that off-property emissions of hazardous air pollutants from a stationary source are at levels that do not threaten public health. The reliance on international and national organizations (third party lists) for the scientific determination of whether a substance is hazardous is necessary because Wisconsin, unlike several other states, does not have a staff of toxicologists to make these determinations. The Department applies a second set of criteria to the initial list of hazardous substances generated through third party lists. These criteria screen out substances that are unlikely to be a threat to public health because of their relatively low toxicity or other chemical properties that make it unlikely that they would be present at concentrations that posed a health risk. The rule revision also includes a new table of substances that only applies to manufacturers of pharmaceuticals. As a result of this second screening, 97 substances that had been found to be hazardous are not being listed in proposed Table A. Table A applies to all sources of hazardous air contaminants. It lists the regulated substances and the emission thresholds, standards, and compliance time period for each.*

The decision to regulate a substance without knowing whether there is an actual threat to public health in Wisconsin rests on the policy objective of preventing public health problems from occurring, rather than correcting them after they have occurred. This objective is met in some other states by requiring facilities to report every chemical that they emit. The state then determines the regulatory requirements on a case-by-case basis. The Wisconsin approach of listing hazardous substances through a rule-making process results in a static list that is only revised periodically. This approach provides notice to facilities of those substances that have been found to be hazardous to public health if inhaled. These may be substances that a facility is

already using or one that it may consider using. In either case, the facility knows in advance what the regulatory requirements are and can decide whether to use the chemical and how to use it in such a way that the emissions do not pose a threat to public health.

Comments: Citizens, environmental and civic groups, and public health officials supported the revisions to the list of regulated substances. (Citizens, Sierra Club, League of Women Voters-Wisconsin Rapids (LWV-WR), City of Madison Health Department, Wisconsin Department of Health and Family Services (WDHFS), WisPIRG).

However, several added that the revisions did not go far enough. They commented that the listing criterion that requires that a substance be classified as a known or suspected carcinogen by two agencies instead of by only one of these two agencies or another reputable agency results in substances remaining unregulated in Wisconsin. (Citizens, Sierra Club, WisPIRG)

Response: *The Department decided at the start of the rule revision process that it would not re-visit the basic criteria for determining whether a substance is a hazardous air pollutant that may be regulated under NR 445. The criterion that a substance be classified as a known or suspected carcinogen by both the International Agency for Research on Cancer and the National Toxicology Program, rather than just one, is one of the basic criteria established during the initial NR 445 rulemaking in 1988.*

2. Cost of Compliance

Comments: The industrial community commented that despite the streamlining measures in the rule, which they support, the sheer number of regulated substances results in significant administrative costs, without measurable environmental benefit. WMC commented that despite substantial cost savings from new streamlining provisions, the proposed revisions impose a $100 million burden on Wisconsin businesses. This estimate is based on the analysis that Kestrel Management Services, LLC, conducted for WMC. (WMC, WPC, Aggregate Producers of Wisconsin, Pechiney Plastic Packaging, Procter and Gamble)

Response: *The Department acknowledges that there are administrative costs associated with the use of hazardous substances by industry. It introduced many streamlining measures in the rule to minimize the additional administrative costs associated with complying with NR 445 and to focus the compliance work where it will make the most environmental difference.*

The Department of Commerce (DOC) interviewed 11 businesses as part of the regulatory impact analysis of the NR 445 rule revisions. The responses to these interviews indicate a much lower average cost to affected sources than the information provided in the WMC/Kestrel analysis. The Department's analysis of the DOC survey indicates that most small manufacturers would need to spend less than $2000 in one-time administrative costs. This indicates a total one time cost of less than $2,500,000 for the revisions to NR 445, compared to the $100 million additional burden cited in the WMC comments.

The large difference in reported cost estimates between the two studies is not an indication that one report is right and one report is wrong. There are several possible explanations for the large difference. The cost of complying with a rule that covers as many potential sources as NR 445 is going to have more variance than a more typical air pollution rule that covers fewer potential sources that are in the same industry or have emissions units engaged in substantially the same process. The firms interviewed in the two processes were very different. The DOC interview panel consisted of small businesses. The WMC/Kestrel interview panels were larger firms with more

complex manufacturing processes who volunteered to participate in the all day sessions to assess compliance cost issues.

Both reports show wide variation in the way firms respond to their environmental health and safety responsibilities. Some firms, both large and small emitters, had well organized and robust computer systems that allowed them to quickly assess new responsibilities while other sources' data bases required time intensive responses to a change in responsibilities.

Facilities that use or handle potentially toxic substances are subject to a number of federal and state reporting and record keeping requirements. Two examples are the OSHA requirements and the Toxics Release Inventory (TRI). The Department recognizes that compliance with these types of requirements entails a substantial effort. However, once this effort has been initiated by any rule governing toxic substances, the ability to parse out the cost to any one rule or to a modification of a rule becomes difficult. The regulatory flexibility analysis conducted by the Department attempted to look at the new, incremental costs of the revisions to NR 445. Some of these costs are actually cost savings to facilities because of the streamlining provisions.

An analysis to assess the full cost accounting associated with an activity will yield a substantially higher dollar figure. While the Department agrees that for accounting purposes a specific business activity can be appropriated over all fixed business expenses including rent, utility payments and computer depreciation, the Department's analysis treated these costs as fixed, except where a unique additional effort was identified. In the WMC/Kestrel analysis, Kestrel applied its Real Cost ™ *analysis tools that strive for full accounting of Environmental, Health and Safety costs and benefits.*

Please refer to the ***Final Regulatory Flexibility Analysis, Attachment 3****, for a more detailed discussion of the Department's analysis of the costs of the rule revision.*

3. Public Health Protection

Comments: Citizens, public health officials and environmental and civic organizations commented that the rule does not provide adequate public health protection because it does not address the cumulative impact of emissions from multiple sources or the non-inhalation health risks of hazardous air pollutants. (Citizens, Sierra Club, LWV-WR, City of Madison Health Department, WisPIRG).

Response: *The Department acknowledges that the revisions to NR 445 do not address either of these issues. A decision was made at the start of the rulemaking process that the primary objectives of this rulemaking were to update the emission standards to reflect current scientific knowledge and to streamline the regulatory process. A conscious decision was made to work within the existing public policy framework of NR 445 and not make fundamental policy changes. The existing framework of NR 445 is to control emissions from a stationary source so that they meet emission standards at the property line. The issues of the cumulative impacts of emissions from multiple sources and the non-inhalation health impacts of emissions, particularly of persistent, bioaccumulative air pollutants, are not addressed in NR 445. These are important public policy issues that merit examination independently of the revisions to NR 445.*

Comment: NR 445 does not adequately address the needs of the very young or old, people with respiratory disease, or those with increased susceptibility to air pollutants. (Sierra Club)

Response**:** *It is generally known that there are sensitive members of the population: the very young and old and those with pre-existing diseases (especially respiratory and heart diseases).*

The air toxics rule uses a safety factor of 10 for non-carcinogens when extrapolating from occupational limits to ambient air exposure limits, in an attempt to reduce the likelihood of negative health effects.. However, it is generally understood that there may be some chemicals and exposure scenarios that could adversely affect sensitive individuals., even if the standard is met. If information becomes available that indicates that current standards are inadequate (e.g., when new health effects data is published in the scientific literature or by certain scientific agencies), the Department will evaluate the information and propose to revise the standard for that chemical.

4. State Regulation in Excess of Federal Regulation

Comments: Several industries expressed concern with state regulations that exceed federal requirements. They commented that this makes Wisconsin a regulatory island in a very competitive world. They note that under the proposed changes, Wisconsin's air toxics program would be three times as large as the federal program and would regulate close to 600 substances as compared to 189 under the Clean Air Act. Some also commented that the DNR should concentrate on meeting federal requirements not putting scarce resources in a "state-only" program. (WMC, Aggregate Producers of Wisconsin, Pechiney Plastic Packaging, etc.)

Citizens and environmental groups commented in support of the state program. They noted that the federal government does not require chemicals to be tested before they are used and industry pressure has prevented many chemical safety laws from becoming a reality at the federal level. Therefore it is appropriate for the state to take measures to protect its citizens by limiting air emissions of chemicals that have been found to be toxic. (Citizens, Sierra Club, LWV-WR, WisPIRG).

***Response**: Ch. NR 445 fills important gaps in the federal hazardous air pollutant regulations. With a few exceptions, the federal standards apply to "major sources". Nearly two thirds of the sources that report hazardous air emissions to the Wisconsin air emissions inventory do not meet the "major source" definition. Often, these smaller sources are located near residential neighborhoods, have short stacks or even exhaust emissions horizontally out of a side wall. These smaller sources can pose a far greater public exposure and health risk than larger amounts of emissions from tall stacks. In other cases, the Sec. 112 standards apply to specific emissions units or operations, leaving significant sources of HAP emissions unregulated. For example, at one facility, the Sec. 112 standard basically provides the same requirements as previously required under ch. NR 445 for the production units. However, the federal standard does not address emissions of over 4,000 pounds of benzene in the wastewater treatment system. For the wastewater treatment system, the Ch. NR 445 limitations remain in effect to reduce the benzene emissions.*

Another gap filled by NR 445 is protection from emissions of non-Clean Air Act hazardous pollutants. For example, ammonia and stoddard solvent (mineral spirits) are not regulated under the federal program. Emissions of these two pollutants in Wisconsin exceed one million pounds each annually. These are regulated under NR 445 for their acute non-cancer health effects and, in the case of ammonia, for its chronic health impacts.

Wisconsin is not the only state regulating air toxics beyond the limits required by the Clean Air Act. As part of an effort to identify other state air toxics program, the DNR conducted a survey and extensive background research on 26 states across the nation. Out of the 26 states contacted, 16 had programs stricter than the federal government's program. 23 states have not been contacted yet. Out of the 23 not contacted, the DNR, according to available information and research, anticipates that at least 5 of the states have or are developing state only air toxics

programs. In all, at least 16, and probably 21 or more states have air toxics programs stricter than the federal Sec. 112 program.

Research revealed wide variation in the size and structure of state only air toxics programs. Programs differ, sometimes substantially, on factors such as listing criteria, health based thresholds, regulatory strategies, timelines, agency discretion, and other policy and program characteristics. States employ a wide range of regulatory strategies to address the public health concern of air toxics. Despite the wide variation in state only air toxics programs, several distinct regulatory strategies emerged. A brief summary of observed regulatory strategies is provided in ***Summary of State Hazardous Air Pollutant Programs, Attachment 4****.*

Within this regulatory universe, the State of Wisconsin's approach falls somewhere in the middle. The DNR does not have the authority to easily modify its list of regulated chemicals and standards, as some states do. The DNR also lacks some of the flexibility available in different regulatory structures. At the same time, the DNR is not saddled with independent determination requirements that are extremely expensive to conduct and that slow the regulatory process to a crawl. Another positive is that the DNR does have the ability to regulate chemicals using health-based standards, which protect the citizens of Wisconsin better than some available strategies. Wisconsin sits squarely in the middle of the expanse of regulatory options.

5. Future Air Toxics Rule Making

Comments: The Department received several comments regarding the future direction for the state's hazardous air pollutant program, once this rule making is complete. Many commenters suggested that the DNR consider the issues of cumulative exposure to multiple hazardous air pollutants and of exposure to persistent, bioaccumulative toxic chemicals. (Citizens, Sierra Club, LWV-WR, City of Madison Health Department, WisPIRG).

WMC concludes their comments by recommending that, with completion of this rulemaking process, the DNR consider taking a fundamentally different approach to regulating toxics – one that focuses on real risks and sources of concern and not the prophylactic approach of third party lists. Wingra Engineering commented that, as part of the pending rule or sometime in the future, the DNR should evaluate air toxics exposures in the state and determine if these rules are reducing actual air toxics exposure. As part of its National-Scale Air Toxics Assessment, USEPA is estimating air toxics exposure in the U.S. Wingra Engineering suggested that a similar study for Wisconsin would determine if NR 445 is effective and what additional control measures are needed.

Response**:** *The Department welcomes input and ideas regarding the future direction of the state's hazardous air pollutant program. The Department has received a special grant from the USEPA to conduct a pilot local area risk assessment to assess the cumulative impacts of emissions from multiple sources in a geographic area. Once this rule-making process is complete, the Department plans to encourage interested parties to participate in this pilot project.*

An analysis of the impact of NR 445 on hazardous air emissions in Wisconsin was included as Attachment 6 to the June 2003 Background Memo to the Natural Resources Board.

B. New Approaches and Concepts

1. Emission Threshold Levels

Comments: There was substantial support for establishing threshold levels for carcinogens based on risk to human health. Properly set threshold levels enable the department to focus available resources on those sources that pose a significant health risk (WMC). It is a more scientific basis for setting thresholds and providing public health protection than the current threshold levels which are based on whether the substance is classified as a known or probable carcinogen. (Sierra Club)

Some said the risk levels in the proposed rule were not protective enough; others said they were overly conservative.

1. Several commenters said the risk thresholds should be changed from 1 in 100,000 risk to 1 in 1 million risk to better reach the goal of protecting public health. (WisPIRG, League of Women Voters of the Wisconsin Rapids Area, Sierra Club)

2. Several commenters said that the extremely conservative assumptions used result in emission thresholds that are lower than necessary to assure that allowable risk levels are not exceeded. DNR's modeling methodology compounds many "worst case" assumptions, which have an extremely low joint probability of taking place. DNR should consider changes to the modeling assumptions to make these risk-based thresholds more realistic. (WMC, WPC)

Response: *The revised rules retain the threshold levels at 1 in 100,000 lifetime risk level using the same modeling assumptions as in the draft rule. The purpose of threshold levels is to serve as a filter. Emissions below the threshold are not considered a threat to public health. Emissions above the threshold are considered a potential threat. In these cases, facilities are required to demonstrate that their emissions comply with the NR 445 standards..*

The threshold level for carcinogenic hazardous air contaminants in the revised rule is a function of the level of public health risk that is deemed to be acceptable, the potency of the pollutant, and modeling assumptions about sites, sources, meteorology and exposure. The NR 445 Technical Advisory Group discussed the issue of acceptable risk level and modeling assumptions over several months and did not reach a consensus. Some argued that the modeling assumptions were overly conservative. Others claimed that they were too liberal because they did not account for such factors as background air, emissions from multiple sources, or the synergistic impacts of chemicals. After considering the input and debate, staff recommended, in the draft rule, the adoption of the lower lifetime risk level of 1 in 100,000 rather than the more protective 1 in a million risk level. Staff also recommended using the modeling assumptions that are used for most air regulatory purposes. Staff concluded that this combination would provide a screening level, or filter, that was protective of public health.

2. Safe Harbor/Corrective Action

Comments: Industry comments were supportive of the safe harbor proposal in the draft rule. (WMC, WPC, PIW).

Citizens, and environmental and civic groups strongly objected to the safe harbor provision as protecting illegal polluters from enforcement action and from being held responsible for negatively impacting human health. They commented that it must be eliminated. (Citizens, WisPIRG, League of Women Voters of the Wisconsin Rapids Area, Sierra Club)

Response**:** *The revised rule retains the safe harbor provision, but adds a requirement for disclosure within fourteen days if a hazardous air pollutant is later identified as being emitted*

from the facility at levels exceeding the threshold levels. The rule also adds a provision to ensure that the Department retains its authority to require the owner or operator of a source to achieve compliance with applicable requirements in a shorter period of time than 90 days if necessary to protect public health and the environment and if feasible.

The Department believes that providing 'safe harbor" for sources that exercise due diligence, on an on-going basis, is warranted in the case of compliance with NR 445. The number of hazardous pollutants listed in NR 445, the threshold levels, which are very low for some, the possibility that hazardous air emissions may be created as a result of the combustion or manufacturing process, and the properties of the chemicals which affect their potential to be emitted, result in a regulation that is sufficiently complex that a source should not be penalized for failing to identify an emission if it is exercising due diligence. The safe harbor provision does not apply to sources who knowingly emit hazardous substances or who are lax or negligent in exercising due diligence. Furthermore, the rule requires sources to come into compliance in a timely manner. The safe harbor provision may even serve as an incentive for sources to be more diligent than they might otherwise have been in order to ensure that they receive the protection.

3. Incidental Emitters

Comment: The Department received comments from industry associations in support of the incidental emitters proposal. (Printing Industry of Wisconsin (PIW), WMC, WPC)

Response: *The revised rule retains the incidental emitters proposal.*

Comment: The Department received over 1000 comments from citizens that industry must not be protected through policies such as "incidental emitters" and "safe harbor" but should be held accountable for unsafe emissions. They must not be protected from fines or other legal action but instead by held responsible for adversely impacting human health. WisPIRG commented that the "safe harbor" and "incidental emitters" policies are part of an alarming trend within DNR to protect polluters at the expense of human health and the environment. They noted that, in response to questions about the policies, DNR staff cited a lack of staff to adequately enforce laws and the need to focus on allowing polluters to self-regulate. They said that while limited staffing may be a problem the solution should not be to create policies that undermine environmental health and protection. (Citizens, WisPIRG)

Response: *The revised rule retains the incidental emitters provisions for the following reasons:*

1. *The Department believes that the public health risks due to the incidental emitters policy will be rare. First, the incidental emitter provision only applies to industries that are unlikely to emit hazardous air pollutants at all or are unlikely to emit at levels that exceed thresholds. Second, incidental emitters are not exempt from NR 445. They must comply with all of the NR 445 regulatory requirements related to any of 81 chemicals of concern or 8 processes or activities of concern. These were identified with the assistance of state, local and university public health experts based on the substance's toxicity, its prevalence in industry and whether it is also classified as particulate matter or as a volatile organic compound.*

2. *Safeguards are built into the rule to quickly protect public health in those instances when an incidental emitter that has exercised due diligence is found to have emissions that exceed any of the NR 445 threshold levels. Incidental emitters that do not exercise due diligence are legally liable for being in non-compliance with NR 445.*

3. *Compliance with the regulations by these facilities is anticipated to be higher as a result of narrowing the regulatory scope. Generally, the facilities eligible for incidental emitters are ones that have little or no experience with air regulations. Simplifying the process for them is more likely to achieve positive results than not narrowing the scope.*

Section 2. Comments on Diesel Generators

The draft rule to regulate diesel exhaust particulate emissions generated significant comment both during the official comment period and in subsequent discussions with stakeholders and other affected parties. As a result of these discussions, a number of changes are made in the revised rule to clarify its applicability, reduce administrative requirements, and provide compliance flexibility. Department staff believe that these changes better account for evolving control technology development, current state requirements, and upcoming federal requirements for on-road fuel without compromising the goal of public health protection. Section A summarizes the requirements that are changed in the revised rule, the rationale for and effect of the change. Section B provides responses to individual comments.

A. Summary of Changes Made to the Rule in Response to Comment

1. Requirement to use fuel oil designated for on-road use

This requirement is changed in two ways. First, instead of requiring the use of fuel designated for on-road use, the requirement now reads that the fuel must have a sulfur content no greater than what is allowed for on-road use. The goal is to have affected engines combusting low sulfur fuel oil that results in a decrease in particulate emissions. Low sulfur fuel also increases the effectiveness of add-on control devices. The main rationale behind the change is to avoid unintended sales tax consequences that could occur as result of the draft rule.

Currently, fuel sold for non-mobile applications is exempt from sales taxes that are applied to fuel used by mobile sources. This exemption is administered by the Department of Revenue by requiring the addition of a colored dye to differentiate fuel stored separately from mobile source fuel at the terminal. This allows the buyer of the fuel to both avoid the tax at the time of purchase and the need to go through an "after the fact" tax rebate program. Owners and operators of engines that would be subject to this requirement were concerned that the wording of the draft rule would remove their ability to purchase the non-taxed fuel. Department staff felt that revising the wording of the requirement would prevent this unintended consequence from occurring.

The second change is related to the timing of the requirement. Rather than requiring the use of low sulfur fuel no later than 6 months after the effective date of the rule, the revised rule is requires use beginning no later than July 15, 2006, the date federal low sulfur fuel requirements become effective for on-road use at the terminal level. This change addresses concerns that the earlier deadline could force owners and operators to purchase on-road fuel regardless of the change in wording discussed above. This situation could develop if there are inadequate market forces besides the state requirement for low sulfur fuel for non-mobile applications at the terminal level prior to the federal date. Discussions with distributors suggest that other factors, such as availability and less potential for fuel contamination, will serve as incentives to make the sulfur level of non-mobile fuel equivalent to the sulfur content of on-road fuel when the federal on-road fuel requirements go into effect in July 2006.

2. Requirement to control particulate emissions from engines

- **Located at a single location for 12 months, or**
- **For the full annual operating period at a seasonal source, and**
- **Combusting, or intending to combust 40,000 gallons per year.**

The draft rule that went to public hearing required particulate control on an engine or aggregation of engines that combusted 40,000 gallons of fuel per year from a single location, or from a location that meets the definition of a seasonal site. The revised rule simplifies the determination as to which engines need to be controlled under this rulemaking. The revised rule removes the 40,000 gallon per year threshold for an aggregation of engines other than those at a test facility and replaces it with a 10,000 gallon per year threshold for an individual engine. It also removes the control requirement for engines operating at a seasonal source.

The draft rule was problematic for a number of reasons. The federal prohibition in the sec. 209(e) of the Clean Air Act prevents state and local agencies from establishing emission standards for engines used in nonroad applications (defined by the Act). Consequently, the draft rule attempted to regulate a subset of portable sources that were not covered by the sec. 209(e) prohibition . These were engines used for the full annual operating period at a seasonal source. Examples of these are engines that provide power for portable crushing operations, asphalt plants and cement plants. The lack of clarity of various definitions at the federal level combined with business practices prevalent in the construction industry, indicated that the draft rule would be unworkable in practice. After lengthy discussions with affected stakeholders, it was determined that recordkeeping and reporting requirements to make the draft rule workable for this segment of industry would be excessive and place a burden on both industry and department resources disproportionate with the expected environmental benefit. The revised rule eliminates the control requirement for engines used for the full annual operating period at a seasonal source.

The 40,000 gallon threshold continues to apply to facilities that test engines. Emissions from engines in this situation are required to be controlled as the emissions leave the facility rather than from each individual engine. In this case it makes no sense to apply thresholds or controls to individual engines, as each engine or group of engines is only used for a short period of time. However, emissions in the aggregate occur from the facility on a continuous basis and are required to be controlled using best available control technology under this rulemaking. Using this approach results in a control requirement for engine test facilities consistent with how other facilities emitting a probable carcinogen without an approved unit risk factor are regulated under ch. NR 445.

3. Existing requirement for engines subject to existing emission standards

The revised rule includes an additional compliance option for engines manufactured prior to 1995. Engine owners and manufacturers raised a concern about the technical feasibility for some older engines to reduce emissions to the levels that were originally proposed. However they suggested that 85% control of particulate matter emissions is obtainable. Emissions of diesel particulate matter from these older engines are great enough to overwhelm the capacity of the control equipment to reach the proposed levels. This concern is substantiated by some of the control certifications issued by the California Air Resources Board that indicate that the certifications do not apply to engines older than 8-10 years old.

4. Best available control technology requirement for engines installed or last modified after effective date of the rule

This requirement is changed in a number of ways. Under the revised rule, the more stringent control requirements become effective on July 1, 2006. This change reflects the current

availability of controls. The revised rule also changes the applicability date from the date the engine was installed or last modified, to the date it was manufactured or last rebuilt. This, makes more sense given the use of these engines in the affected industries.

The requirement for affected engines to use best available control technology is revised to include the option of meeting emission standards by installing and using certified control equipment. The addition of the option is significant because it allows owners of new engines to avoid the need for a construction permit prior to using the engine. Instead, the owner or operator is required to notify the Department in writing that they are using a certified control device prior to the use of the engine. The revised rule specifies the information that needs to be included in the notification.

5. Addition of a provision to allow the use of uncontrolled engines during periods of maintenance or repair

The revised rule allows the use of an uncontrolled engine during periods of maintenance or repair for up to 10 days per occasion. This is added in response to concern that, even with the additional flexibility, the control requirements would force an owner or operator to stop operating in these situations. Allowing the use of a replacement engine for 10 days should provide sufficient time for repairs to be made or, in situations where repairs will take longer, for a controlled engine to be moved to the site. The rule requires the owner or operator to keep records when using a replacement engine in this manner.

6. Removal of diesel exhaust reference concentration emission standard.

Diesel exhaust particulate is removed from applicability tables in chs. NR 407, 438 and 445. Upon approval of this rule, the need for a specific listing is no longer necessary. Continuing to list creates redundant and unnecessary administrative requirements. The most significant consequence of this change is the removal of the reference concentration (RfC) emission standard for sources of diesel exhaust particulate.

This removal will have no adverse environmental impact. Emissions from the combustion of diesel fuel oil in stationary sources are already exempt from the RfC standard in the current NR 445. The exemption was justified by showing that emission levels from industrial and utility boilers would never exceed a small fraction of the allowed level. Review during permit applications for internal combustion engines used for distributed electrical generation showed that emission levels that were no higher than approximately 80% of the RfC standard. Use of low sulfur fuel and the emission controls required under the revised rule will substantially reduce emissions from these sources, resulting in emission levels well below the RfC standard.

Removing diesel exhaust particulate emissions from air emission inventory requirements in NR 438 and permit inclusion levels in NR 407 removes a redundancy. Other rule provisions require reporting emissions and fuel used in these engines.

B. Response to Comments

The following acronyms and abbreviations are used to identify the commenting organization or company.

API	Wisconsin Petroleum Council, Division of American Petroleum Institute
APW	Aggregate Producers of Wisconsin
Kohler Co.	Kohler Company

MDPH	Madison Department of Public Health
Sierra Club	Sierra Club-John Muir Chapter & Sierra Club-Midwest Offices
WDHFS	Wisconsin Department of Health & Family Services
WEMDA	Wisconsin Engine Manufacturer & Distribution Alliance
WMC	Wisconsin Manufacturers & Commerce
WMCA	Wisconsin Motor Carriers Association
WTBA	Wisconsin Transportation Builders Association

1. Authority/need to regulate

Comment: Removal of the fossil fuel exemption for diesel fuel is not justified in the absence of a known unit risk factor. The decision to remove the exemption is based on questionable science. (WMC, APW).

Response*: The revised rule retains the fossil fuel exemption. Facilities with emissions of hazardous air contaminants resulting from the combustion of group 1 virgin fossil fuels, which includes diesel fuel oil, are exempt from having to demonstrate compliance with the individual standards in Table A for each of the constituents that make up the fossil fuel, in this case diesel exhaust particulate. However, the revised rule includes fuel and control requirements for particulate emissions from internal combustion engines combusting diesel fuel oil. Diesel exhaust particulate has been determined to be a probable carcinogen under this rule revision and there are public health concerns about the emissions from diesel generators. In this case, diesel exhaust particulate is the regulated substance, not the individual constituents that make up diesel exhaust. Furthermore, these requirements apply only to internal combustion engines combusting fuel oil, not to external combustion.*

The decision to regulate internal combustion engines combusting fuel oil is based on the finding that diesel exhaust particulate matter is a probable carcinogen. There is agreement in the scientific community about this fact. There is still debate about its unit risk factor, or degree of potency, but the debate is not about whether or not it has carcinogenic properties. The Department's policy is to establish control requirements for known and probable carcinogens even if they do not have an established unit risk factor. The reason is to protect public health from exposure to these emissions.

Comment: New listing protocols suggest not listing diesel exhaust due to insufficient risk. (WMC)

Response*: The Department interprets the commenter to be saying that the lack of a US EPA unit risk factor for diesel exhaust constitutes insufficient risk that should prevent it from being regulated in ch. NR 445. The Department disagrees with this assertion. Reasons to exclude a contaminant from regulations are contained in proposed NR 445.13(2)(b). Please refer to the "Rational for Regulating Diesel Exhaust Particulate Emissions" section of the June 3, 2002 background memo from the former secretary, Darrell Bazzell, to the Natural Resources Board for additional details. The Department's policy is to establish control requirements for known and probable carcinogens even if they do not have an established unit risk factor. The reason is to protect public health from exposure to these emissions.*

Comment: The Department has misinterpreted sec. 209(e) of the Clean Air Act. DNR is pre-empted from imposing fuel and control requirements on non-road engines (WTBA, WEMDA).

***Response**: Section 209(e) of the Act prohibits states and local agencies from setting emission standards and control requirements for nonroad engines, not portable sources. This is an important distinction. The category of portable sources is much broader than just nonroad engines and includes many emissions sources not subject to sec. 209(e). Furthermore, the section is specific in prohibiting emission standards and does not contain any prohibition against a state or local agency setting restrictions relating to fuels or hours of operation.*

Comment: There is no need for the Department to regulate diesel emissions in light of current and anticipated federal standards (WMC, WTBA). The rule should not apply to engines meeting new federal standards. Exempting these engines would provide an incentive to replace existing engines (WTBA)

***Response**: The inadequacy of federal regulations to address diesel particulate emissions was discussed in more detail in the June 3, 2002 background memo. To briefly summarize, federal regulations for on-road and nonroad sources combusting diesel fuel oil focus on reducing ozone precursors, sometimes at the expense of an increase in particulate emissions from these engines. No federal regulations are proposed or anticipated to control diesel exhaust particulate emissions for sources subject to this rulemaking.*

While exempting new engines might create an incentive to replace existing engines, the particulate emission level for the new engines would be 50-100% greater than what the revised rule requires of existing engines and up to ten times what is required for new engines.. Furthermore, diesel engines can have an extremely long life. These new, uncontrolled engines could be in service for an extended amount of time.

Comment: The fuel requirement is not necessary. "Spill-over" benefits from the non-road engine sector will occur because existing petroleum product distribution infrastructure dictates that a substantial portion of the fuel consumed by non-road diesel equipment is certified for highway use (API).

***Response**: The Department believes the intent of this comment is that it is unnecessary for the Department to require the use of an equivalent low sulfur fuel oil because there would be a "spill-over" fuels benefit to the nonroad sector once the federal on-road fuel requirements become effective in 2006 due to the distribution infrastructure for the industry. The Department acknowledges that there may be a "spill-over" benefit. At this time, the Department is unable to rely on either the distribution infrastructure or existing state or federal regulations to ensure that only low sulfur fuel oil is available for the sources subject to the rule.*

Comment: Area specific regulations such as the ones in the draft rule will further constrain the petroleum products distribution system and limit the ability of the oil industry to quickly respond to unexpected supply distributions The draft rule could potentially lead to area-specific or boutique fuel requirements. Requirements concerning the use of ultra-low sulfur fuel must be tied into dates embodied in federal regulations that govern the availability of the fuel nationally. The draft rule requires the use of ultra-low, 15 ppm sulfur content diesel fuel (API).

***Response**: The revised rule does not contain any area specific fuel requirements. Owners and operators of engines are required to combust fuel oil with a sulfur content no greater than what is required on-road. The rule does not specify a different sulfur content from on-road diesel fuel. In a much earlier discussion, the Department had considered requiring the use of ultra-low 15 ppm sulfur content diesel fuel but this proposal was revised based on input from the Technical*

Advisory Group. There is no evidence to suggest that this requirement will constrain or limit the oil industry's ability to deal with unexpected supply disruptions.

Comment: The Department mismanaged US EPA's risk range for diesel particulate matter in relation to the health effect, inflated its characterization of diesel exhaust from a potential to probable or likely carcinogen and mischaracterized diesel exhaust as a significant source of PM10 or PM2.5 in ambient particulate matter (WEMDA, WMCA).

Response*: The Department does not use US EPA's risk range in setting control requirements. The requirement to regulate particulate emissions from diesel engines is based on the classification of diesel exhaust emissions as probable carcinogen by the International Agency for Research on Cancer(IARC) and the National Toxicology Program (NTP). As a probable carcinogen, diesel exhaust is subject to Best Available Control Technology requirements. This is the emission standard for probable carcinogens that was established when NR 445 was first promulgated in 1988. US EPA issued a final health effects assessment in 2002 which agreed with IARC and NTP that diesel exhaust particulates are probable carcinogens*

Comment: Further reductions of air toxics from diesel exhaust are not technologically feasible (WEMDA).

Response: *There are a number of technologies currently available to reduce particulate diesel exhaust from internal combustion engines, including diesel particulate filters and oxidation catalysts. There is extensive documentation to support technological feasibility.*

2. Cost of regulation

Comment: The cost differential (if taxes are not considered) between low sulfur on-road fuel and off-road fuel, while small now, is expected to grow as new federal standards take effect (WTBA).

Response: *The expected cost differential, without considering taxes, is expected to be approximately $0.05 per gallon of fuel in 2006 based on cost estimates by US EPA. It is the Department's expectation that the price differential for low sulfur fuel will become smaller rather than grow as more refinery capacity is changed over to produce the fuel due to federal on-road requirements.*

Comments: The draft rule forces fuel users to go through tax refund process. This deprives sources from use of money and likely will result in some users overpaying taxes (WTBA). This will increase the workload for both DNR and DOR staff, which is not an efficient use of limited resources (APW).

Response: *The Department agrees that the draft rule had the potential to force users to go through a tax refund process that they currently avoid. The revised rule allows regulated sources to use the tax exempt fuel designated for off-road use provided the sulfur content of the fuel is no greater than what is allowed for on-road at the time of the purchase.*

Comment: Costs of control could be significant, especially for small businesses (WTBA).

Response: *The control requirement is expected to apply to non-emergency electric generators and engines in permanent asphalt plants and portable asphalt plants, rock crushers and cement plants that operate in the same location for 12 months or more. According to comments provided, some of the affected sources may be owned or operated as small businesses. Department staff estimates the cost of technology to be in the range of $3000-$6800 per engine, depending on the*

size of the engine. Please refer to ***Wisconsin Diesel Retrofit Technology Cost Analysis, Attachment 5,*** *for additional cost information.*

Comment: The cost of BACT for new engines is too high a price to pay for small emission rate reductions (WEMDA).

Response: *The revised rule allows the owner or operator of a new engine to comply by using certified control devices similar to what is allowed for existing engines. The Department expects that most owners and operators will install the certified control devices rather than go through the BACT analysis and getting a construction permit. This change significantly reduces the cost of this requirement. The option to comply by using BACT remains in the rule. It is possible that future engines may be redesigned to a level where add-on control equipment to reduce diesel particulate emissions would not be needed. In this event, the Department would consider the new engines to be BACT.*

Reductions of diesel particulate matter in the 85-90% range are expected from engines using the lower sulfur fuels and the control devices. The low sulfur fuel also results in over a 90% reduction in sulfur dioxide emissions..

Comment: The draft rule will create significant financial burden on industry and competitive disadvantage (Kohler Co.).

Response: *The requirements in this rulemaking are to be applied statewide so no in-state competitive difference should develop. Facilities engaged in engine testing will be required to install controls that meet BACT if they combust more than 40,000 gallons per year fuel oil. Energy, economic and environmental impacts, as well as other costs related to the source are all considered as part of the technology assessment for BACT.*

3. Applicability

Comment: Listing diesel emissions triggers emission inventory and permitting requirements. (WMC, WTBA).

Response: *With the exception of new engines that choose to comply by going through the BACT process, the revised rule does not subject any additional sources to emission inventory or permitting requirements. As stated previously, the Department expects few, if any, owners or operators will choose to go through the BACT process given the opportunity to comply using certified control equipment.*

These engines are subject to existing requirements in NR 406, 407 and 438. One of the advantages of using a categorical performance standard approach is that it removes the need to list specific threshold levels for diesel exhaust particulate in the applicability tables in NR 407, 438 and 445 and allows for the ability to propose a permit exemption for new engines that otherwise would not need a permit.

Comment: Aggregating engines to determine annual fuel use is a significant expansion from Technical Advisory Group discussions resulting in controls being required on a multitude of smaller engines (WTBA).

Response: *It is clear from discussions with WTBA that there was a misunderstanding arising out of the Technical Advisory Group meetings. It appears that this was a result of the draft rule introducing a new way to regulate portable sources compared to how the air program has*

regulated them in the past. While the draft rule was consistent with what the Department discussed during stakeholders meetings, from WTBA's perspective the draft rule significantly expanded engines subject to controls.

The revised rule is rewritten so that control requirements are applied to portable sources in the same manner as in other air regulations. This should make the revised rule easier to understand by owners and operators of regulated sources.

Comment: Multiple on-site engines should be aggregated to determine annual fuel use (Sierra Club).

Response: *Under the revised rule, applicability of control requirements is based on the engine's power rating, fuel use and the length of time the engine stays in one location rather than the more complicated method in the draft rule that required aggregated records for fuel use by engines for each location.*

Comment: The Department should eliminate the requirement for engines that meet the new performance standards to demonstrate compliance with the reference concentration standard for diesel emissions (WTBA).

Response: *The requirement to meet the reference concentration is removed in the revised rule.*

Comment: The Department should eliminate the control requirement for engines operating for the full annual operating period at a seasonal source. The language is confusing and open to a multitude of interpretations. Definitions for "full annual operating period" and "seasonal source" need to be clarified (WTBA).

Response: *The revised rule removes language related to seasonal sources.*

Comment: The Department should ensure that non-regulated, portable sources really are portable (Sierra Club).

Response: *The revised rule requires sources such as portable asphalt plants, rock crushers and cement plants to use low sulfur fuel beginning no later than July 15, 2006. Additionally, any portable source that remains in a single location for at least 12 months will be subject to control requirements under this rule.*

Portable sources are required to file re-location notices to the Department under s. NR 406.04(5). in order to avoid having to obtain a construction permit prior to beginning operation at a new location. Therefore, the Department has determined that existing requirements are adequate to establish applicability under this rule for portable sources.

4. Clarification

Comment: The regulations governing what constitutes a replacement engine need to be clarified. It is unclear how fuel use and time at a location would be determined in situations where there is an open period of time between equipment being located at a source (WTBA).

Response: *The revised rule makes it easier to determine whether or not an engine is subject to the control requirement by regulating by engine rather than by location. Language describing how to consider replacement engines is no longer needed and has been removed.*

Comment: The certification process in the draft rule needs to be clarified. The ability to rely on 3rd party certification is unclear (WTBA).

Response: *The draft rule used "certify" and "certification" to describe two separate and distinct situations which undoubtedly led to some confusion. First, the draft rule required the use of a control device "certified" by either the state of California Air Resources Board or the US EPA to reduce particulate emissions to different levels specified by rule. Second, the draft rule required owners and operators to "certify" compliance with the rule requirements . The final rule clarifies these situations by creating a definition in ch. NR 445 for a "certified control device" and removing the dual use of the term "certification" in the compliance demonstration requirements.*

Using a 3rd party certification allows the Department to accept work done by control equipment manufacturers to meet federal and California engine requirements rather than have the owner and operators of these engines in Wisconsin test each individual control device. For the most part, these other requirements have focused on situations where control devices are added to engines used in on-road applications. Therefore most of 3rd party certifications available to Wisconsin sources at this time do not speak to the control effectiveness for engines used in stationary applications. However the technical differences between the different applications is not significant. Controls certified for a specific manufactured engine should perform equally well whether the engine is used in an on-road or non-road application. California has proposed a process to certify control devices for stationary sources and discussions with US EPA indicate they will be begin certifying controls in the future as well. Certifications issued through these processes are expected to more closely correlate with use in non-mobile applications.

Finally, the revised rule allows for Department approval of an alternative or equivalent control method to address situations where 3rd party certification is not available.

Comment: Definition of modification needs to be clarified and included in rule language. Appears to conflict with proposed change to s. NR 406.07(2). Appears that draft rule would have routine maintenance constitute a modification and trigger a BACT requirement (WTBA).

Response: *The revised rule replaces the term "modification" with "rebuilt", which is now defined in ch. NR 445. It should be clear in the revised rule that routine maintenance does not trigger a modification subject to a BACT requirement. Also, using the term "rebuilt" removes any possible conflict with NR 406.07(2).*

5. General Comments

Comment: The draft rule results in marginal benefits (APW).

Response: *The Department disagrees with this comment. The revised rule is expected to reduce diesel particulate emissions from regulated controlled sources by 85-90% from current levels. It also ensures that new engines used in stationary activities are controlled to minimize public health impacts. While the federal government is moving to reduce diesel particulate emissions from mobile sources, they have yet to address the issue from the stationary side.*

Department staff is concerned about emissions from these sources for a number of reasons. The expanded use of diesel engines as sources of distributed electrical generation can lead to an increase in diesel exhaust particulate emissions. These emissions often occur near residential or work locations and can have significant impacts due to the short stack heights typically associated with this use. The control requirements in the revised rule will ensure that emission increases in the future are dramatically lower than they would have been without the rule.

Comment: The draft rule seems inconsistent with what was discussed during the Technical Advisory Group meetings. Use of the term "will combust" seems to imply that the 40,000 gallon per year threshold for requiring controls is based on potential rather than actual fuel use (WTBA).

Response: *The draft rule intended to have the control requirements apply to owners and operators of engine or engines that either had combusted 40,000 gallons in the past, or knew, based on the expected application over the next 12 months, that 40,000 gallons of fuel would be combusted. This differs from the regulatory use of potential as defined in NR 400 and used in air regulations where one considers how much fuel might be combusted in a year solely based on engine design.*

Comment: It is inappropriate to list diesel exhaust particulate matter until litigation against CARB is resolved (WEMDA).

Response: *No information has been submitted to the Department as to the relevance of the litigation in California to the draft rule. The Department uses it own process to develop and recommend requirements for sources of hazardous air contaminants which is codified in proposed s. NR 445.12. The Department believes it is inappropriate to postpone this rule while various issues related to regulating sources of diesel particulate emissions in California are being resolved.*

Comment: The draft rule mandates special design and build engines in Wisconsin (WEMDA).

Response: *The Department disagrees. The control requirements in the revised rule can and are expected to be met by application of add-on particulate control devices to the engine. The rule does not require specially designed engines. Nor is the Department aware of any information that supports the assessment that the application of controls or use of low sulfur fuel oil would be technically incompatible with the engine designs subject to the revised rule.*

Comment: Reduce the 40,000 gallon threshold in light of recent US EPA findings (WDHFS).

Response: *US EPA has reaffirmed its findings that diesel particulate matter should be classified as a probable carcinogen although it has not yet established a unit risk factor for it. The Department's decision regarding the applicability threshold for control requirements is a risk management decision and takes various considerations into account. These considerations include technological feasibility, cost and other state and federal requirements as well as potential public exposure.*

The revised rule changes the threshold for control requirements to 10,000 gallons per year for a single engine rather than 40,000 gallons per year for all engines operating at a single location. This change was made to clarify how the control requirement is to be applied and to ensure that it is being applied to the engines with the most significant emissions. The 40,000 gallon per year threshold will still apply to any facility that tests engines.

Comment: Support control of emissions from diesel generators (MDPH)

Response: *Thank you.*

Comment: The Department should ascertain the number and location of diesel engines (Sierra Club).

Response: *The Department has an inventory of engines as a result of current emission inventory and permitting requirements. This inventory provides a good estimate of the number and location of the engines expected to be subject to this regulation. The Department acknowledges that the inventory does not include all engines. For example, emergency generators and small engines that do not need permits may not be on the inventory. The revised rule does not create inventory reporting requirements for these types of engines. These are typically used sporadically and the Department does not believe that imposing reporting requirements on these types of engines is warranted.*

Comment: The Department should consider the hours of operation when setting standards. These engines are most likely to operate when consumer electricity demand is at its highest, utility emissions are high and temperatures are usually excessively hot and conducive to chemical transformation and reaction. At these times, unhealthy air is the norm. (Sierra Club).

Response: *The revised rule sets the applicability level for the control requirement on the gallons of fuel used rather than on the hours of operation. The Department feels that this is a more appropriate method for protecting people from possible carcinogenic health effects, because it is a better indicator of the amount of emissions emitted over the course of a year. The Department acknowledges that diesel emissions may also contribute to other air quality concerns, however, these are beyond the scope of this rule.*

Section 3. Comments on Control of Coal Dust Emissions

The Department received numerous comments from the utility sector, paper industry, and coal distributors regarding the coal dust regulations in the draft rule. The Department also received comments in support of regulating coal dust from environmental groups and public health officials.

The Department continued to meet with affected stakeholders after the Natural Resources Board authorized public hearings on the rule. Participants at the meetings included representatives from the utilities, the paper industry, coal distributors, the Wisconsin Department of Administration, state and local public health officials and environmental groups. The purpose of the meetings was to discuss alternative methods for regulating emissions of coal dust that would avoid some of the problems identified in the public comments.

As a result of these discussions, a number of changes are made in the revised rule to clarify its applicability, reduce administrative requirements, and provide compliance flexibility. Department staff believe that these changes provide for a more effective and workable approach to regulate coal dust emissions and thus provide better public health protection.

Section A summarizes the requirements that are changed in the revised rule, the rationale for and effect of the changes. Section B provides responses to individual comments.

A. Summary of Changes Made to Draft Rule in Response to Comments

The draft rule listed respirable coal dust in Table A as an acute non-carcinogenic substance and established an ambient air concentration emission standard. It included several alternative

compliance options specific to coal dust emissions in recognition of the fact that managing outdoor fugitive emissions of coal dust is fundamentally different from managing emissions from a stack. The public comments addressed four major issues: the listing of coal dust as a hazardous air contaminant, the adequacy of other requirements for controlling particulate matter emissions, the efficacy of the draft compliance demonstration alternatives, and the alternative of a "best management practices" regulatory approach.

Department staff convened three meetings with affected stakeholders in an attempt to develop a regulatory approach that met the dual objectives of protecting public health and minimizing unnecessary regulatory obligations. These meetings were followed by extensive discussions with representatives from the Wisconsin Paper Council, who had expressed a desire to arrive at a mutually acceptable resolution, if possible.

The revised rule adopts a management plan regulatory approach. Instead of listing respirable coal dust in Table A and setting an ambient air concentration standard, the revised rule creates a new section in NR 445, s. NR 445.10, that establishes control and compliance requirements for the handling and storage of coal. The revised rule requires management plans for sources of outdoor fugitive coal dust emissions and emission standards for sources of non-fugitive coal dust emissions.

1. Requirements for Outdoor Fugitive Coal Dust Emissions

The requirements for outdoor fugitive coal dust emissions take into account the unpredictability of these emissions and the impracticality of measuring them on a regular basis. The management plans must describe the control measures that the facility can take under a variety of conditions. In addition, the facility must have the ability to control outdoor fugitive emissions in a timely manner. These requirements are more specific than those in NR 415 and provide assurance that facilities will have the ability to control coal dust emissions during non-routine periods when emissions might be expected to be greater than normal. These include periods of high activity or periods of drought, freezing temperatures or high winds. Examples of control measures include active measures such as the application of water or chemical dust suppressants, passive measures such as the use of enclosed delivery and handling systems or solid fencing, or access to third parties, such as a contractor with a watering truck. The decision as to which measures a facility will use is made by the facility. This approach differs from a best management practice or minimum performance requirement approach in that it does not prescribe specific measures that must be used under specific conditions.

Compliance with this section is determined by the development and implementation of the outdoor fugitive coal dust management plan and the facility's ability to apply control measures in a timely basis. Compliance is not determined as an emission standard.

2. Requirements for Non-Fugitive Coal Dust Emissions

The requirements for non-fugitive coal dust emissions apply to emission sources that are controlled by a fabric filter and that exhaust to the outdoor air. Facilities may chose one of two methods for meeting the emission standard. They may either limit visible emissions from each source to 10% opacity or they may demonstrate, through air dispersion modeling, that the respirable coal dust emissions from all of their non-fugitive emission sources do not exceed the ambient air concentration standard of 21.6 ug/m^3 for any 24 hour averaging period.

B. Response to Comments

The following acronyms and abbreviations are used to identify the commenting organization or company.

AE	Alliant Energy
CIBO	Council of Industrial Boiler Owners
DPC	Dairyland Power Cooperative
MDPH	Madison Department of Public Health
MERC	Midwest Energy Resources Company
Sierra Club	Sierra Club-John Muir Chapter & Sierra Club-Midwest Offices
WDOA	Wisconsin Department of Administration
WDHFS	Wisconsin Department of Health & Family Services
WE	WE Energies
WisPIRG	Wisconsin Public Interest Research Group
WMC	Wisconsin Manufacturers & Commerce
WPC	Wisconsin Paper Council
WUA	Wisconsin Utilities Association

1. Regulating Coal Dust as a Hazardous Air Pollutant

Comment: We do not think the Department should establish an ambient air concentration limit for outdoor fugitive emissions of coal, nor should coal dust be listed as a hazardous air pollutant in NR 445. The Department has failed to show that fugitive dust emissions from coal facilities in Wisconsin pose a threat to public health. (WPC, WUA, AE, WDOA, WE, DPC, MERC, CIBO)

Response: *Respirable coal dust is proposed to be regulated under NR 445 for its acute non-cancer health effects. The Department finds that there is sufficient information available to make the determination that coal dust meets the criteria for regulation as a hazardous air pollutant. The first step in determining whether or not to regulate a substance under NR 445 is to determine that the substance is a hazardous air pollutant. Respirable coal dust meets the criterion for determination as a HAP with acute non-cancer health effects, namely, it has a threshold level established by the American Conference of Government Industrial Hygienists. The second step is to determine whether or not to regulate the hazardous air pollutant under NR 445. This involves evaluating the substance against a set of decision criteria. In making this determination, the Department may consider whether other regulations provide adequate protection for public health or welfare. The Department evaluated whether Ch. NR 415, which regulates the control of particulate matter, provided adequate public health protection and determined that it did not. This evaluation is discussed more fully in Section 2 below.*

Because of the comments received and the recent news articles about the health effects of coal dust, the Department requested additional guidance from the Wisconsin Department of Health and Family Services (DHFS) on the health risks associated with the exposure to coal dust in outdoor air. In its response, DHFS said,

> *"Coal dust is a complex, heterogeneous mixture containing more than 50 different elements and their oxide. There is extensive literature on the risks associated with coal dust exposure among mine workers and others…. including increased incidence of progressive massive fibrosis and chronic obstructive pulmonary disease in workers exposed at levels near the prevailing occupation exposure limit of 2 mg/m^{3}. In issuing recommendations for environmental exposure to outdoor air contaminants, the Division of Public Health has adopted a policy whereby an ambient air concentration at which*

*health risk is considered to be de minimus is calculated …(this) yields a risk-based ambient air concentration of 0.02 mg/m^3 (21.6 μg/m^3) for coal dust. Based on our review, limiting exposure to this level is both necessary and sufficient to offer the public adequate protection from the potential acute and chronic health effects of coal dust exposure." (**Letter to Caroline Garber, DNR, from Mark Werner, DHFS dated January 23, 2003, Attachment 6**)*

Comment: We support regulating coal dust under this rule. Coal dust has acute health effects, including asthma and other respiratory illnesses. (WisPIRG, Sierra Club, MDPH)

Response: *The Department agrees that emissions from coal dust should be regulated. The revised rule regulates sources of coal dust emissions, but no longer includes an ambient air concentration standard for outdoor fugitive dust emissions. This change is made in response to comments about difficulties in implementing the alternative compliance demonstration options that were included in the draft rule as well as concerns about their effectiveness.*

2. The Adequacy of NR 415

Comment: Fugitive coal dust is already regulated under NR 415 and this is adequate. We do not agree with the Department's assessment that NR 415 is not sufficient to adequately control fugitive coal dust from an air toxics perspective. (WMC, WUA, AE, WDOA, WE, DPC, MERC)

Response: *In its analysis for the draft rule, the Department concluded that NR 415, "The Control of Particulate Matter", does not provide a regulatory framework that assures that the public would be adequately protected from the acute non-cancer health effects of respirable coal dust. The reasons for this conclusion were:*

1. *NR 415 does not establish emission limits that could be compared to the NR 445 emission standard for coal dust to evaluate the adequacy of public health protection provided.*
2. *NR 415 does not set a minimum performance standard for dust mitigation practices that could be evaluated to determine the adequacy of public health protection provided for respirable coal dust.*
3. *The correction of problems related to nuisance complaints and the absence of health-related complaints is not a sufficient basis to conclude the NR 415 provides adequate protection of public health.*
4. *The evaluation of the limited amount of ambient monitoring data available did not support the conclusion that NR 415 was sufficient, in and of itself, to protect public health from the air toxics perspective.*

Please refer to the "Evaluation of Ch. NR 415" section of the June 3, 2002 background memo from the former secretary, Darrell Bazzell, to the Natural Resources Board for additional details.

3. Proposed Compliance Demonstration Alternatives

Comments: The proposed modeling and monitoring compliance alternatives for coal dust will create analytic and administrative work that will produce inconclusive results and provide little assurance of improved public health protection. In addition, the potential for reasonable controls to be insufficient to meet the proposed standard is likely to result in over-use of the variance provision to demonstrate compliance. This is an inadequate substitute for viable compliance alternatives. (WMC, WPC, AE, WDOA, WE, MERC, CIBO)

Response: *The revised rule removes coal dust from Table A and the alternative compliance demonstration options. Instead, the revised rule establishes requirements to be met by sources*

that handle or store coal. The Department acknowledges that sources of outdoor fugitive coal dust emissions differ from most other stationary sources of air emissions. The recognition that management of outdoor fugitive coal dust emissions is fundamentally different from the management of stack emissions led to the inclusion in the draft rule of alternative compliance demonstration methods unique to coal dust. The Department agrees with many of the comments made about the impracticality and efficacy of these methods.

4. Best Management Practices

Comments: Best management practices should be used and these requirements should be incorporated into NR 415 (preferable) or NR 445. (AE, WDOA, WE)

Response: *The revised rule has adopted a management plan approach that requires the owner or operator of a source that handles or stores 1,000 tons or more of coal to have the ability to control, in a timely manner, outdoor fugitive dust emissions. It also establishes emissions standards for non-fugitive coal dust emission sources. This approach does not prescribe management practices but does prescribe certain conditions for which control measures should be planned and for which the facility should be prepared to respond to in a timely manner. The management plan approach was chosen in recognition of the variety of methods that can be used to control fugitive emissions depending on such factors as the amount of coal handled.*

The Department considered revising NR 415 to include specific best management practices for coal handling and storage, but decided that it was more appropriate to address coal dust emissions in NR 445. The authority and rationale for regulating coal dust emissions comes from NR 445. Ch. NR 415 regulates particulate matter as a criteria pollutant. It requires sources to take necessary precautions to manage their particulate matter emissions so as to reduce the overall impact to the ambient air. The introduction of management requirements specific to coal dust, and not emissions of all particulate matter from coal handling and storage facilities, is driven by its coal specific health impacts. Revising NR 415 to include coal dust management practices would necessitate changing the regulatory purpose of NR 415 to include controlling individual species of particulate matter as hazardous air pollutants.

5. Special Study for Coal Dust

Comment: Several commenters said that there should be a special study of coal dust emissions before making the decision to list it in NR 445. This was suggested as an alternative if the Department continued to maintain that NR 415 did not provide the regulatory framework to assure adequate public health protection. (WMC, WPC, MERC)

Response: *The revised rule includes control requirements for sources that handle or store coal dust. In the Department's opinion, a special study is not needed.*

Section 4. Comments on Specific Issues

A. Emission Thresholds

Comment: The Department should add a 5th stack height category for those facilities with stacks over 75 feet high, meeting GEP criteria. (WMC)

Response: *The Department considered but decided not to add the 5th stack category. The addition of another column on Tables A, B and C would add to the complexity for all sources,*

while benefiting a relatively few number of sources that are likely to have sophisticated environmental management staffs. If a 5th stack category were to be added, it would be more beneficial to a larger number of sources if it were at a lower stack height. However, it is the Department's judgment that 4 stacks is a reasonable number of threshold levels to provide regulatory streamlining benefits while avoiding too much complexity.

Comment: It is difficult to quantify emission for some chemicals with low thresholds. DNR should formally state its policy of treating non-detects as "zeroes" in the rule. (WMC)

***Response**: It is important to note that the current air toxics rules, as well as the current permitting and emissions inventory rules, require sources to quantify emissions. The issue of the level of detection being below either threshold or permitted levels is not a new issue, although the Department acknowledges that this situation may occur more frequently as a result of the rule revision. Due to the case-by-case nature of the pollutants, and the varied types and concentrations of emission sources, promulgating the policy in rule would be extremely cumbersome, complex, static and rigid. These issues are best addressed on a case-by-case basis using professional judgment, with the policy providing a consistent and non-arbitrary framework for decision-making.*

B. Modeling Procedures

Comments: The models used to set threshold levels and to demonstrate compliance should be the most up-to-date models available. They should be robust and acceptable to DNR and Division of Health. DNR should issue modeling guidance consistent with the "state of the art" in modeling procedures and establish a workshop or technical advisory committee. (Sierra Club, Wingra Engineering).

***Response**: The Department will use AERMOD, the most up-to-date model under development by USEPA, and other approved regulatory air models and guidance as they are finalized by USEPA. There are plans at this time to issue additional modeling guidance.*

Comments: DNR's modeling methodology compounds many "worst case" assumptions. Worst case assumptions include the choice of which year of air meteorology to use, and the modeling of a source at 100% capacity and assuming all of this highest annual concentration will occur for 70 years in a row. Other conservative modeling parameters are that a) building downwash occurs for all facilities regardless of stack height; and b) property lines are only 30 ft away, vs. a more "realistic" 300 ft (this is what is assumed for some of the EPA modeling). (WMC)

***Response**: Department staff met with WMC to review this issue. The modeling assumptions had been discussed in great depth by the Technical Advisory Group (TAG) during the initial rulemaking process. At that time, some in the industrial community argued that the assumptions were overly conservative, for many of the reasons cited by WMC in their public comments. Others, in the public health and environmental communities, argued that the assumptions were too liberal since they did not account for such factors as background air, emissions from multiple sources, or the synergistic impacts of chemicals. Based on its professional judgment, the Department made some changes to the modeling assumptions during the TAG process, but decided that most of the assumptions represented a reasonable middle ground between being too conservative and being too liberal. These assumptions are not changed in the revised rule.*

C. Compliance Demonstration Requirements

1. Compliance Flexibility

Comments: The Department received many comments supporting the additional compliance flexibility added to the rule such as:

- additional stack heights and thresholds for easier compliance demonstrations
- allowing modeling "off-ramps" that reduce the workload for sources and the Department without risking public health
- allowing the use of product substitution or operational controls to limit emissions of carcinogens below threshold rates as a compliance option
- risk-modeling alternatives that demonstrate that a source's impact is below a certain level of risk (although not all commenters agreed on the level of risk that should be acceptable)

***Response**: Thank you.*

Comment: Clarify NR 445.08(2) so no more than one method of compliance is required in a single circumstance. (Wisconsin Paper Council)

***Response**: The revised rule clarifies the language in that portion of the rule.*

Comment: As alternative compliance options for sources over the thresholds, we believe that one in one hundred thousand risk should be used instead of one in one million (sources should be allowed up to 10 times more risk) (Kohler)

***Response**: The revised rule retains the one in one million level of risk for the single pollutant alternative compliance option. The one-in-one hundred thousand-risk level is used to establish thresholds in the rule in order to screen for sources that could present a potentially high risk. For compliance with the rule, more detailed and site specific modeling is required to determine more precisely what the risk is, taking into account the stack height, distance to fenceline, and other site specific parameters. The Department believes it is appropriate to have a more stringent compliance requirement of one-in-one million risk for a single chemical when the actual site specific dispersion modeling is used.*

The rule includes an alternative compliance option in which the facility's total emissions of all carcinogens, including exempt emissions, do not exceed a one in one hundred thousand risk level. The Department believes that this risk level, because it includes emissions of all substances rather than a single substance, is appropriate.

2. Incinerators

Comment: The rule should be revised to allow municipal solid waste incinerators to be exempt from NR 445.07(4)(a) if the current emission limits can be shown to be as protective of human health as the LAER limits, and suggested that they be allowed to use the same modeling compliance demonstration options as other sources of carcinogens. (Xcel Energy)

Response: The revised rule allows incinerators the option of demonstrating compliance with NR 445 by showing, through a multi-pathway risk screening analysis, that the total impact from all air hazardous pollutants from the facility, including exempt emissions, does not exceed a 1 in 100,000 risk level over a lifetime. A multi-pathway risk screening analysis assesses the risk from inhalation, ingestion, and dermal contact.

3. Variances

Comment: There should be no time limit for when a variance is submitted. (WPC, PIW)

Response*: The revised rule removes the deadline for submitting a variance. The commenters correctly point out that leaving the language in the revision "as is" would have the unintended consequence of precluding a source from using the variance option if it had not determined a variance was needed until the deadline had passed. For example, a source may try to substitute a non-hazardous substance, find that it does not provide a quality product and therefore need to install control equipment and need a variance.*

4. Definition of pesticide disposal

Comment: The definition of "disposal" (pages 91-92 of green sheet) is of concern if it unwittingly captures small sources that are not intended to be regulated by the rule (WPC, PIW)

Response**:** *The revised rule removes the definition of disposal. It is not necessary.*

D. Permit Issues

1. Compliance Certification

Comment: Prior to the effective date of this rule, the Department should provide notification of new reported emissions when providing notice of re-authorization of facilities with existing Title V permits. This will give the public ample opportunity to comment on monitoring and compliance aspects for those NR 445 emissions. (Sierra Club)

Response: *Permit renewals are public noticed. Although these notices do not contain references to specific regulations or emission limits in the permit itself, the NR 445 certifications are part of the public record. Beginning for calendar year 2004, sources will be reporting to the annual inventory their emissions for the contaminants that are being added under this rulemaking. This will provide an opportunity for an individual to monitor contaminants or sources of concern.*

Comment: NR 445 provides a generous three year period after the effective date of the rule for completion of compliance certification for existing sources. (Sierra Club)

Response: *The revised rule retains the three-year compliance schedule for existing sources. This schedule provides sources with a reasonable amount of time to meet the standards either through product or process changes, material substitution or the installation of pollution control equipment. This schedule is also consistent with how the rule was implemented when promulgated in 1988 and consistent with the timeframe that USEPA uses for implementing federal Maximum Achievable Control Technology (MACT) requirements for air toxics.*

Comment: The proposed rules need to be modified to continue to require new or modified sources to apply for construction permits and for operation permits. (Sierra Club)

Response: *The revised rule retains the certification option. The reason is to avoid unnecessary administrative procedures, permit applications and reviews when a source can document that it meets the applicable NR 445 requirements and does not need an air permit for any other reason. Changes and clarifications in the revised rule make it easier for the owner or operator of a*

source to determine which requirements apply and what compliance methods are available to use. The certification does not excuse any source from meeting all applicable requirements.

Comment: Kohler objects to the requirement to have a written certification statement anytime a facility plans to install or modify a piece of equipment which is exempt from general permitting requirements. (Kohler)

Response: *The revised rule requires an owner or operator of a source to certify compliance in situations where maximum theoretical emissions of a hazardous air contaminant in NR 445 exceed threshold levels and allowable compliance methods can be used to demonstrate compliance. Currently this situation requires that a permit application be submitted, reviewed and approved prior to the source making the modification regardless of whether the source has to actually limit emissions to meet the standard. The requirement to have a written certification is an administrative savings for sources when compared to the existing process.*

Under the revised rule, an owner or operator of a source does not have to submit a certification if the modification does not result in maximum theoretical emissions of a hazardous air contaminant greater than threshold levels, consistent with how the permit exemption works today.

2. Federal Enforceability

Comment: DNR should take whatever steps are necessary to assure that NR 445 requirements do not become federally enforceable. (Wisconsin Paper Council and WMC))

Response: *NR 445 is a state-only regulation and the Department will not be submitting it to EPA as a State Implementation Plan (SIP). Thus, the enforceability of NR 445 by the EPA is very limited. The only time NR 445 becomes federally enforceable is when emission limits or other requirements found in NR 445 are placed into construction permits. However, the proposed rule allows most new and modified sources to self-certify compliance with the NR 445 emission requirements rather than obtain a construction permit. The only sources that will not be able to take advantage of this provision are those new or modified sources that need to demonstrate compliance with BACT or LAER control technology requirements. It is not possible for these sources to self-certify compliance since the department must approve the BACT/LAER determination.*

Thus, the opportunity for the EPA to claim federal enforceability will be kept to a minimum. Moreover, the NR 445 requirements will be included in the operation permit as "state only" requirements. It is the department's position that NR 445 requirements that are rolled over into an operation permit from a construction permit lose their federal enforceability once they are in an operation permit and flagged as a "state only" requirement. In addition, all existing sources will have their NR 445 requirements incorporated into an operation permit as a "state only" requirement, so they will not become federally enforceable.

3. Modified Sources

Comment: What is the justification for exempting emission limitations under NR 445 [from definition of modified source]? (Wisconsin Paper Council)

Response: *This language is not necessary and has been removed.*

E. New Approaches and Concepts

1. Due Diligence/ Safe Harbor/Corrective Action

Comments: A reasonable search and inquiry should be done periodically, not just once (for example when new products are introduced or when processes change). Annual emissions reporting requirements should be integrated with a review of a facility's emissions to reflect due diligence. We support the concept that a source is also responsible for evaluating hazardous air contaminants that are formed in processing the material (NR 438.03(1)(b)). (Sierra Club)

Response: *Sources have an ongoing responsibility to exercise due diligence. Whenever new hazardous air contaminants are used or a new process is contemplated, sources have a responsibility to conduct a reasonable search and inquiry.*

Comment: If a source that has exercised due diligence is later found to present a health concern or is violating a standard, in most cases, 90 days is too short especially if controls are needed. Although the Department has the ability to extend the deadline, it should make time frame longer in the rule and keep the ability to get extension (WPC, PIW)

Response: *The proposed rules retain the 90-day time period for coming into compliance. The Department believes that compliance should be as timely as possible. The ability to grant an extension addresses those situations where additional time is necessary.*

2. Incidental Emitters

Comment: We are supportive of the concept of incidental emitters. Given the lower thresholds for some HAPs, we are anxious to reduce reporting burdens under NR 438 for newly regulated sources. The incidental emitter concept was responsive to this concern. However, the proposal was relaxed during the rule development process. We support the rule provision only if the actual annual emission levels are reduced from the proposed 3 tons of volatile organic compounds (VOC) and 5 tons of particulate matter (PM). The original levels were to have been one ton of VOC or PM which we could support. (Sierra Club)

Comment: The "Incidental emitters" policy leaves the public at great risk for health effects. It must either be removed entirely or be based on levels that may harm human health. Initially, the Department proposed to exempt facilities from most or all regulation if their emissions were less than 1 ton per year VOC and PM. As direct result of interviews and conversations with industries, DNR raised the threshold levels. This decision was based not on the impact of VOC or PM on human health, but rather the wishes of potential polluters to escape regulation. (WisPIRG)

Response: *In response to this comment, the impact of lowering the incidental emitter threshold to 1 ton of VOC or PM rather than 3 tons VOC and 5 tons PM was studied by evaluating the Department's most recently available (2001) Air Emissions Inventory. As a result of this analysis, no changes to the incidental emitters' thresholds are being proposed. However, two chemicals, Chromium VI and nitric acid, are being added to Table E, Chemicals of Concern, in the revised rule.*

Under the incidental emitters provision, the regulatory scope for incidental emitters is limited to certain processes and a shorter list of chemicals of concern (Table E). Many of the chemicals on this list were chosen by a panel of public health officials because of their toxicity and their prevalence in industrial uses. Other chemicals were included because they are not classified as

either PM or VOC and therefore would not be considered in the 3 ton VOC/5 ton PM (or 1 ton VOC/1 ton PM) incidental emitter threshold level. These chemicals are common enough and toxic enough that their usage could exceed regulatory thresholds.

The analysis of the 2001 Air Emissions Inventory, which became available in fall of 2002 after the NR 445 public hearings were held, showed that 113 sources with reported hazardous air pollutant (HAP) emissions were added to the Incidental Emitters category by raising the threshold level from the original proposal of 1 ton/year of VOC and PM to 3 tons VOC and 5 tons PM. (The 3 ton/year of VOC and 5 ton/year of PM emission threshold was chosen because this is the reporting threshold for the Air Emissions Inventory.) These 113 sources reported emissions of 70 different chemicals.

Table 1. Number of "Incidental Emitters" in 2001 Air Emissions Inventory

Emission Categories	**Number of Sources Reporting to AEMS**	**Number of Sources Reporting HAPs**
Proposed Incidental Emitters *(< 3 tons/yr VOCs and 5 tons/yr PM)*	473	189
Original Incidental Emitters *(< 1 ton/yr VOC and 1 ton/yr PM)*	183	76
Difference *(Sources between 1 and 3 tons/yr VOC and 1and 5 tons/yr PM)*	290	113

A further analysis of the 2001 Air Emissions Inventory found that 87 of these 113 sources had HAP emissions that are listed on Table E (54 of these sources reported only Table E chemicals). An additional two sources were found to have processes of concern, chrome electroplating and pesticide repackaging. These sources would need to come into compliance with NR 445 for those emissions listed on Table E and for the processes listed in the incidental emitters language in the rule.

Table 2. HAP Emissions from Sources between 3/5 and 1/1 Incidental Emitter Thresholds

Total Number of Sources	**Sources emitting both Table E and non-Table E substances**	**Sources emitting only Table E substances**	**Sources emitting only non-Table E substances**
113	33	54	26

The analysis also found that 59 of these 113 sources emitted HAPs that are not listed Table E substances (33 sources emitted both Table E and non-Table E substances, while 26 sources reported only chemicals not listed on Table E). These non-Table E emissions were further analyzed to determine whether the actual reported emissions exceeded threshold levels. The analysis found two sources that emitted non-Table E substances over threshold levels. One emitted chromium compounds (Chromium (VI) also known as hexavalent chromium) and the other emitted nitric acid. The non-Table E emissions of the other 57 sources were below threshold levels.

Hexavalent chromium is mainly found in electroplating or similar operations that put protective coatings on metal parts. One source that makes inorganic pigments previously only reported chrome metal and other less toxic forms but in the last reporting year, its emissions were reported as hexavalent chromium. It reported over 23 pounds of Chromium (VI) emissions in

2001 as compared to the revised rule threshold of 0.148 pounds per year for a short stack (under 25 feet high).

Because there was no information prior to this latest inventory that other types of sources might emit chromium (VI) compounds, the Department had previously only listed chrome electroplating as a process of concern, rather than listing chromium in Table E as a chemical of concern. In the revised rule, Chromium (VI) compounds are being added to Table E for the following reasons: it was found to be emitted by a source that is not an electroplating company, it is used in other industries, and it is a known carcinogen.

The source of nitric acid is a manufacturer of fabricated pipe and fittings that reported emissions of approximately 2,900 pounds of nitric acid in 2001. This was the first time the facility reported nitric acid emissions. The NR 445 threshold for nitric acid is 2,400 pounds per year for a short stack (under 25 feet high). Nitric acid can cause severe effects such as pulmonary edema and corrosion of the lining of the mouth, nose and lungs. It can cause damage that leads to inflammation of the lungs and conducting airways and can exacerbate asthma and bronchitis. For these reasons, it is added to Table E in the revised rule.

It is important to note that the revised rule contains "backstop" language that allows the Department to require an incidental emitter to comply with NR 445 requirements if it emits a non-Table E substance at levels that exceed threshold levels. Thus, the Department would have been able to require these two sources to meet the chromium VI and the nitric acid emission standards without revising Table E. Furthermore, the Department may revise Table E based on future findings from the air emissions inventory or other sources of information. The rule requires incidental emitter sources that currently are reporting emissions to the inventory to continue to do so.

3. Environmental Management Systems (EMS)

Comment: Several commenters requested that the proposed EMS provision be deleted from the rule package. The Wisconsin Foundry Association said that although the provision was included at the request of the Air/Foundry Pilot EMS Project (or the BRAT Company), they now believe it is unnecessary and that there is enough flexibility within NR 445 to allow the department to consider an EMS-based compliance demonstration. The Sierra Club stated that it was premature to include the specific pilot in the NR 445 revisions. The Legislative Clearinghouse requested clarification on a number of specific provisions.

Response: *The proposed EMS provision has been deleted from the revised rules.*

F. The Listing Process and Future Revisions

The listing process and the scope of NR 445 elicited numerous comments from industrial groups as well as citizens, environmental and civic groups. This issue is addressed in Section 1 of the Response to Comments. The comments included in this section are more specific to the implementation of the listing process.

Comment: DNR must create a process to quickly evaluate and regulate chemicals, as data becomes available. We support yearly evaluations to be designed for a "watch list" that will bear further scrutiny and action if necessary. Public health agencies should be solicited for nominations to the Watch List. (Sierra Club, League of Women Voters-Wisconsin Rapids Area)

Response: *The Department, in this rule revision, has established a process to identify chemicals of potential concern and to have a periodic report to the Natural Resources Board (NR 445.12(1). No later than every three years the Department, in consultation with the Department of Health and Family Services, will review information related to listing, delisting, setting thresholds, standards and control requirements for hazardous air contaminants. In addition, nothing in the rule prevents interested parties from submitting chemicals for review to the Department.*

Comment: We request that DNR post the reports, table revisions and requests from affected sources on a web site in a timely manner.

Response**:** *We think this is an excellent suggestion and will continue to use the web site as a tool to allow interested parties to follow the work of the Air Program in this regard.*

Comment: Support the opportunity to challenge the listing of a particular substance (PIW)

Response**:** *Thank you*

G. Specific Listings in NR 445

1. Silica and Wood Dust

Comment: Many companies and trade associations commented that they support the decision not to regulate silica and wood dust at this time and to conduct special studies for silica and wood dust. However, most of those who commented opposed listing them in Table A of Ch. NR 445. They do not believe silica and wood dust should be listed until DNR knows what it plans to do. Listing them, they argue, presupposes that they will be regulated under NR 445.

The Wisconsin Department of Health and Family Services strongly supports the Department's finding that silica and wood dust should be listed in the table of hazardous air pollutants because of their toxicity and the prevalence of human exposure from environmental sources.

The Legislative Clearinghouse commented that the blank table entries for silica and wood dust as well as the exemptions are superfluous and that leaving them both out of the rule would have the same effect.

Response: *The Department agrees with the Legislative Clearinghouse. The revised rule does not list silica and wood dust in Table A or in the list of exempt emissions. This change has no regulatory impact.*

Comment: The Sierra Club commented that the rule should require the Department to propose regulations at the end of the 2 year special studies rather than a progress report.

Response**:** *The Department's intention is to proceed as expeditiously as possible in determining and recommending how to address silica and wood dust. However, it is not in a position to commit to proposing regulations within 2 years*

2. Glass Wool

Comment: Glass wool has been reevaluated and should be removed from NR 445 lists. (WHO/IARC & North American Insulation Manufacturer's Association)

Response: *Glass wool is removed from NR 445 Table A. in the revised rule. The International Agency for Research on Cancer (IARC), in Volume 81 of their Monograph Series, reevaluated the class of chemicals and substances called "Man-made Vitreous Fibers", which includes glass wool, ceramic fibers, rock wool, slag wool and other fibers made from "glass-like" materials. Their reassessment of glass wool found that there was insufficient evidence for the carcinogenicity of glass wool. The Department of Health and Family Services concurs with the decision to remove the carcinogenicity designation for glass wool. However, it suggested that since glass wool has acute toxicity and has a Threshold Limit Value (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH), it should be listed in Table A with an ambient air concentration and a 24-hour averaging time. Since the Department did not have glass wool listed as a hazardous air contaminant with acute toxicity in the version of the rule that went out to public hearing, the Department is not listing glass wool in Table A at this time.*

3. Hydrogen Sulfide and Ammonia

Comment: Hydrogen sulfide and ammonia from confined animal feeding operations pose potential threats that must be further studied and regulated as needed. Sierra Club urges DNR to add such studies in this rule proposal. (Sierra Club)

***Response*:** *Hydrogen sulfide and ammonia are listed in Table A of NR 445 and sources exceeding thresholds are subject to requirements.*

4. Asphalt Fumes

Comment: The Department received several comments in support of the decision not to list asphalt fume as a regulated chemical in NR 445. (Wisconsin Transportation Builders Association, WMC, Wisconsin Asphalt Pavement Association, Inc.)

***Response*:** *The Department appreciates the cooperation shown by the affected industries and the efforts they made to help develop a workable rule that provides additional public health protection.*

To briefly reiterate the decision and its supporting rationale; the department determined that a specific standard for asphalt fume was not needed due to numerous specific standards for the individual contaminants that are regulated under NR 445. Owners and operators of asphalt plants are well aware of these requirements and the actions they will need to take to comply with the revised rule.

H. Relationship Between Federal and State Programs

1. Anti-backsliding

Comments: Industries that commented on this issue supported the proposed removal of the "anti-backsliding" rule language. The Sierra Club objected to the deletion of the "anti-backsliding" requirement. This provision required sources of emissions regulated under a federal Sec. 112 standard to continue to comply with the NR 445 emission standards after the promulgation of the federal standard. The Sierra Club commented that that industry should

certify that the federal standard provides equivalent public health protection. They also said that the Sec. 112 standard should be promulgated before the state removes this language. They note that there is no guarantee that EPA will promulgate the standards in a timely manner.

Response**:** *The anti-backsliding requirement was necessary in the past because most facilities in the state had to comply with the state rule before the federal standard had been promulgated. As of this date, all of the federal Sec. 112 standards have been promulgated or proposed and NR 445 is being revised, with new standards added and many existing standards changed. Thus, in many cases, sources will be complying with the federal standard before the revised NR 445 standards become effective. For existing sources, it is highly likely that all the federal standards will be promulgated before the compliance date of the new state standards, which is 3 years after the effective date of the rule. For new or modified sources, the federal program requires a case-by-case MACT determination if the federal MACT standard has not yet been promulgated. For these reasons, the Department believes that the anti-backsliding provision is, or will very soon be, outdated. Its deletion in this rulemaking will result in greater clarity about the interface between state and federal programs, will avoid the administrative confusion of determining whether a particular NR 445 standard is a pre-revision or a post-revision standard and avoid unnecessary overlap between the federal and state programs.*

Comment: We would support a status report on the promulgation of federal MACT standards, and a related recommendation to substitute federal MACT standards on a case-by-case basis as meeting state standards and requirements. (Sierra Club)

Response**:** *The Department has produced status reports, and will continue to do so, on the promulgation of MACT standards. The recommendation to substitute federal MACT standards on a case-by-case basis as meeting state standards is not clear but we think the intent is to continue to require a source to comply with pre-revision NR 445 standards if the MACT standard is found to be less protective than the state standard. If this is the intent of the comment, the Department believes that this would be too impractical, too confusing to sources to implement, and too costly in terms of Department staff resources. The reason is that the Department would only be able to do this for those existing NR 445 standards that are not being revised in this rulemaking. In addition, some in industry question the Department's legal ability to do this. (see Wis. Stats, s. 285.27(2)(a))*

2. Proposed MACT Rules

Comment: DNR should exempt proposed and yet to be proposed MACT rules from NR 445. We think it is inappropriate to double regulate industry. (Kohler)

Response**:** *All of the MACT rules should be promulgated by the compliance deadlines in the rule revision. If for some reason they are not promulgated, the Department will have the responsibility to write MACT standards on a case-by-case basis according to the MACT "hammer" provisions of the Clean Air Act.*

3. Guidance

Comment: DNR should develop written guidance and have this guidance substantially complete before NR 445 is finalized. If necessary, NR 445.01(1)(b) should be modified if significant issues arise in development of the guidance. (Wisconsin Paper Council)

Response: *The Department has met with the Wisconsin Paper Council to develop an interim guidance on the interface between NR 445 and the Clean Air Act " Maximum Achievable Control Technology (MACT)" standards (s. 112 of the Clean Air Act Amendments of 1990). Department*

staff and WPC agreed that it would be beneficial to document the results of the meeting to promote a clear understanding and consistent interpretation of the interrelationship by all industry sources and all Department staff. This has been done.

I. Accidental Spills

Comment: We support keeping the existing NR 445 language regarding spills. We did not support industry efforts to change this provision and are pleased that DNR continued existing practices. (Sierra Club)

Comment: NR 445.08 needs to be deleted or revised to say that "a release of a hazardous air contaminant emissions must be reported if required under ch. NR 706". (Wisconsin Manufacturers and Commerce)

Response: *The rule language is not changed in the revised rule. A note has been added to clarify the relationship between NR 445 and NR 706.*

Section 5. Response to Comments from Legislative Council Rules Clearinghouse

Comments related to form, style and placement in administrative code, adequacy of references to related statutes, rules and forms and clarity, grammar, punctuation and use of plain language were submitted by the Wisconsin Legislative Council Rules Clearinghouse in Clearinghouse Rule 02-097.

The majority of the comments were addressed as suggested by the rules clearinghouse. Following are responses to comments that were not changed, or responded to in a different manner that what was suggested.

Comment 2.a. Comment was made that existing language in s. NR 400.02(95) not proposed to be amended as part of the revision contained substantive provisions that should be placed in rule. No changes are being proposed at this time. This language has it's origin in federal language unrelated to the proposal that the department took to public hearing.

Comment 2.b.,e., f., g., 5.h., and i. Language related to using an environmental management system in chs. NR 400, 439 and 445 has been deleted from the proposed rulemaking as result of comments received during the public comment period.

Comment 2.i. Introduction language in existing introduction language in sections NR 445.04 and 445.05 has not been revised as suggested. This language will be only effective during the transition period between existing and proposed requirements not to exceed 3 years after the effective date of the rule. The department expects to remove this language from the administrative code at that time.

Comment 2.n. The listings and exemptions for types of silica and wood dust have been deleted from Table A. and NR 445.05 respectively.

Comment 2.z. Section NR 445.09 has been substantially rewritten in response to comments. The comments from the rules clearinghouse are no longer relevant.

Comment 5.c. Definition of compression ignition internal combustion engine has been moved to 445.02 and left as proposed. Language is based on definition found in federal requirements and is used for consistency.

Comment 5.j. Definition of disposal has been deleted due to comment and determination that it is unnecessary.

Comment 5.q. No change has been made. This language is consistent with other regulations in the NR 400 series and has been in existence since 1988. Regulated sources are familiar with this language and any change may actually create more confusion.

Comment 5.r. No change, units in grams per brake horsepower-hour is correct.